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The entry into working life of higher education graduates: an educational perspective

The research underlying this article seeks to improve our understanding of the processes of entry into working life of higher education graduates. In theoretical and conceptual terms, contributions from a variety of disciplines (particularly economics and sociology) and different theoretical currents and frameworks have been used to interlink perspectives which are usually developed in parallel yet separately. In empirical terms a case study was conducted on the process of entry into working life of graduates of a higher education institution, the findings of which are summarised and compared with data from other national and international studies on the same theme. The article concludes by identifying areas for further research that would benefit from Europe-wide comparison, and from interlinking theoretical and disciplinary perspectives.

Introduction

This article describes a study carried out in 2003 entitled 'The entry into working life of higher education graduates: an educational perspective', part of a PhD thesis in Education Sciences undertaken in the Faculty of Sciences and Technology at Universidade Nova de Lisboa. The purpose of the research, focusing on relationships between education and work/employment, is to improve our understanding of how higher education graduates enter working life.

This attempt to explore a deeper understanding of entry into working life is relevant both in *disciplinary* terms - little research has been done on the subject - and in *social* terms. While a higher education graduate's future once appeared to be guaranteed, associated as it was to high social status and income, the significance and value of a higher education qualification is now clouded by uncertainty. Thus, the entry into working life, particularly access to employment, is gradually acquiring greater social prominence. It has also become a subject of interest to students and their families, employers, academics and even governments, who see it as a criterion for assessing higher education.

Our work seeks to broaden the research themes normally examined in the area of entry into working life, focusing not only on graduate access to employment, a topic traditionally addressed in this field of research (1), but also on entry into working life as a period of learning, personal development and identity building. In an attempt to go

beyond reductionist views which see entry into working life merely as the product of education's responses to the needs and demands of the economic and professional world, we perceive entry into working life as the result of interaction between academics (their values and strategies), employers (their approaches and needs) and graduates (their personal and social trajectories and dynamics) (2).

The first part of the article sets out some of the theoretical and conceptual issues arising in the research, informed by contributions from a variety of theoretical currents and frameworks and different disciplines (3), and attempts to interlink parallel perspectives that are usually developed separately.

The second part outlines the empirical research method used and sets out the main findings. A case study was conducted of graduates of the Faculty of Sciences and Technology (FST) at Universidade Nova de Lisboa, focusing on three units of analysis: the graduates themselves, employers and academics. Where possible, comparisons were drawn between the data from our research and the findings of other national and international studies on the same subject in order to identify similarities and dissimilarities between the process of entry into working life of FST graduates and the same processes experienced by graduates of other higher education institutions.

The article concludes by identifying areas for further research that would benefit from Europe-wide comparative studies.

(1) For some, the issue of access to employment is 'the fundamental question' in the area of research into entry into working life, the same authors stating that 'l'accès des jeunes à l'emploi, question fondatrice de ce domaine, reste la plus étudiée' (Kieffer and Tanguy, 2001, p. 98).



A model for analysing entry into working life within educational research

A field of research under construction

The field of research into entry into working life is currently a 'conceptual patchwork' (Trottier, Perron and Diambomba, 1995), and since the 1990s has been in a 'stage of construction' (Trottier, 2001) (¹). Several countries have recorded a growth in the number of initiatives for collecting information on graduate entry into working life, both by higher education institutions and central governments (²). There seems to be a broad consensus, however, among various authors (Trottier, Laforce, Cloutier, 1998; Vincens, 1997; Nicole-Drancourt and Roulleau-Berger, 1995; Trottier, Perron and Diambomba, 1995; Tanguy, 1986) that this work has been done without far-reaching reflection or a rigorous definition of the concepts to be brought into play, including the concept of entry into working life.

There are two main reasons for this, the first being that research into entry into working life is still in its infancy. It was from the 1970s, when there was an increase in the difficulties young graduates encountered in finding employment and the need arose to plan and manage the education system in conjunction with increasingly rapid changes in the production system, that a field of research emerged, focusing on the problematic relationships between education and work/employment. This field 'conjugates in the plural', according to Jobert, Marry and Tanguy (1995), to encompass a variety of research topics, *inter alia* the planning of education, continuing education, qualification and entry into working life.

Secondly, the definition of the concepts and perspectives to be brought into play in this field of research is embryonic because it lies on the margins of several disciplines and theoretical approaches. Reflection on entry into working life involves contributions from a variety of disciplines (sociology, economics, human resources management, studies on youth, education, work, employment) and a variety of theories focusing on educational issues, the analysis of the labour market and coordination between education and work/employment. Entry into working life is therefore seen as a thematic research area within research into the

relationships between education and work/employment, and subject areas, methods and approaches to analysis must therefore be reconciled where possible.

The most relevant approaches and theories in studying entry into working life

Our research therefore involved placing a range of the most relevant and significant approaches and theories in the area under study on a systematic footing, so as to clarify the perspective adopted in our research into entry into working life.

A range of *traditional* theories and approaches on the relationships between education and work/employment was considered. These do not attempt to address the concept of entry into working life directly or to highlight the problems it involves, but they are important references in examining the theory of human capital and some of its subsequent developments, the sociology of educational inequalities, labour market theories (from theories of segmentation and regulation to the employment system approach), to human resource requirements and the social demand for education.

A range of theoretical perspectives on the concept of entry into working life was also considered. According to some of these, this concept is determined by models of entry into adult life (Olivier Galland), by corporate and state policies and strategies (José Rose), by employers and their methods of managing labour, and by the relationship between individuals and employment (Michel Vernières). Others stress the aspect of constructing a personal and social identity leading to the achievement of the individual's ambitions (Jean Vincens and Claude Trottier et al), or see the concept under a dual structural and individual dimension (Nicole-Drancourt and Roulleau-Berger, Claude Dubar).

Various perspectives on the functions of higher education were also analysed according to a continuum between two opposite extremes: functionalist positions and academic positions. The contributions of various thinkers on education and higher education, particularly Ronald Barnett and Ulrich Teichler, were brought into play for this analysis.

(¹) Very recently, during a final revision, we came across a similar approach by a French researcher (Bel, 2001) who, in order to study vocational training for young people, stresses the importance of making the field of research into training-employment more complex, distinguishing three strands: training system, production system and trainees-workers.

(²) Particularly economics and sociology, which are fundamental in this field of research, as stressed by Trottier, 2001; Kieffer and Tanguy, 2001.

(³) According to this author, 'au cours des années 1990, on a franchi une nouvelle étape dans la construction du champ de recherche et la définition de l'objet d'études. Différentes approches théoriques permettent maintenant de mieux conceptualiser le problème de la transition et d'en proposer diverses interprétations. On est passé du stade du constat du problème à celui de sa construction.' (Trottier, 2001, p. 9).

(⁴) Initiatives to collect information on entry into working life have been developed since the 1970s in several countries, including France, the United Kingdom, Canada and Spain. In many cases these initiatives involve higher education graduates, and they generally began before those carried out in Portugal.



The functionalist approaches, also called 'utilitarian' (Conceição et al., 1998) and 'instrumentalist' (Barnett, 1994), are based on the assumption that higher education has a particular function in relation to the society it is part of. The academic approaches, also referred to as 'culturalist' (Conceição et al., 1998) and 'liberal' (Barnett, 1994), reject the functionalist assumption on the grounds that higher education has its own intrinsic value. These positions correspond to two distinct models for understanding the link between higher education and work/employment. Both of them are open to question, but as opposite extremes they are useful in defining the potential for such linkages.

Although a detailed analysis of each of these perspectives and approaches is beyond the scope of this article, they must nevertheless be identified and systematically organised so as to clarify the assumptions underlying the model for analysing entry into working life established in our research.

Theoretical research assumptions

An initial assumption is the idea that entry into working life must be seen as a process extending over time, throughout which the similarities and dissimilarities between education and work/employment evolve. The notion that entry into working life represents a circumscribed moment of linking education and work/employment is thus rejected.

This assumption derives from recognition that, at empirical level, the way the transition from education to working life takes place has changed, and it is now longer and more complex. As Trottier states (2000), this means that the training-employment relationship is now simultaneous rather than linear and consecutive, or, according to Chagas Lopes and Pinto (2001), that the traditional steps of learning-entry into working life-employment-retirement have changed and no longer follow this sequence.

In theoretical and conceptual terms, this illustrates the inadequacy of perspectives based on the alignment between education and employment (the initial versions of the theory of human capital and the manpower requirement approach, for example), and those focusing above all on the functioning of the labour market (labour market theories). The

analyses to be adopted must see the relationship between education and work/employment as an interactive one, involving similarities and dissimilarities between the two, and considering entry into working life as a phase that covers a more or less extensive period of time⁽⁶⁾.

A second theoretical research assumption is that entry into working life is a process that involves various actors and does not only relate to graduates' labour market trajectories on completion of their university studies.

This assumption recognises the relevance of a holistic analysis, encompassing various dimensions and factors that influence the entry into working life. Such factors were identified from the theoretical perspectives, approaches and proposals of various authors cited throughout the theoretical part of our work. Entry into working life is seen as a process, not only because it is protracted, but also because it is multidimensional.

Our understanding of the processes of entry into working life would benefit from broadening the scope of analysis to encompass more than a study of the trajectories, conduct and strategies of the actors and/or a study of the forces involved in the building of the individual's professional choices and identity. We therefore agree with Vincens (1995) when he puts forward the notion of 'system of entry into working life' with a view to expanding the framework for analysis and including other categories of actors, such as employers and the education system.

In other words, it is important to build an analysis of entry into working life as a process deriving from comparison of and interaction between the approaches and strategies adopted by various relevant actors. This research seeks to respond to this challenge by means of a preliminary attempt to define a multidimensional analysis of entry into working life.

A third theoretical research assumption closely linked to the above corresponds to identifying the actors considered to play a part in the process of entry into working life. Based on systematically organising theoretical perspectives, approaches and proposals, graduates, employers and academics are placed under the spotlight, each of these groups being taken as a unit of analysis in studying entry into working life.

⁽⁶⁾ The question arises here of defining the period of entry into working life, an aspect still not fully clarified on conclusion of the research. We believe it is fair to say that the process of entry into working life begins with obtaining a qualification and the subsequent search for a job, even if the subject has already begun to build a professional identity during their academic career. The definition of the end of the period of entry into working life, however, continues to be more problematic. The existence of various possible criteria of both a subjective nature (e.g.: expectations prior to entry into the world of work) and an objective nature (e.g.: obtaining a job with an indefinite contract) must be accepted for this definition (Vincens, 1997).



Graduates are a unit of analysis because their trajectories reflect and synthesise the influence of various actors and factors throughout the period of entry into working life. They should also be seen as a unit of analysis because various theoretical approaches already cited (the employment system approaches of Trottier, Dubar, Nicole-Drancourt and Rouleau-Berger, for example) show that graduates' strategies and conduct are not governed by a strictly economic rationale, but are in fact marked by elements of a social and cultural nature and by the dynamics of socialisation and identity building.

Employers are a unit of analysis because as various labour market theories and Rose and Vernières' approaches show, graduate opportunities for entering working life are influenced by factors related to labour management and recruitment options. Moreover, the functionalist and academic models of higher education suggested that this subsystem of education must take due account of the limitations arising out of the functioning of the labour market and employers' preferences, even if such aspects should not be followed blindly.

Academics are a unit of analysis since some of the approaches cited (the employment system and human resource requirement approaches, for example), and the functionalist and academic models, suggest that the orientations and practice of the functioning of higher education, particularly as regards preparation for working life, play a pivotal role in how graduates enter working life. Education (in this case higher education), plays an important role, together with other actors, in how the entry into working life takes shape after graduation.

In summary, the analysis presented clearly shows that we consider entry into working life to be a multidimensional process, since it has implications both at conceptual and methodological level, as Tanguy has argued (1986). The role each actor plays in the process of entry into working life must therefore be examined and the process analysed as the result of the interaction between the various actors involved.

Empirical research method

In line with the analysis set out above, our empirical research involved a range of data collection and processing procedures fo-

cusing on the three units of analysis considered essential for analysing processes of entry into working life. Academics, employers and graduates were interviewed and graduates were asked to complete a questionnaire.

The questionnaire was posted (⁷) to FST graduates who completed their courses in the year 1995/96. In that academic year, 401 individuals completed degree courses at the FST and, after updating the addresses in the institution's files, we managed to contact 301 graduates, 103 of whom completed the questionnaire (⁸). The questionnaire was an adaptation of the pilot survey carried out nationwide (⁹) to allow findings to be compared.

Four FST graduates who used to work in the six companies contacted were also interviewed, since we were told that no FST graduates were working in two of the companies when we contacted them.

Six employers in the companies (¹⁰) were interviewed, selected on the basis of an analysis of offers of training and/or employment sent to the FST (¹¹) in the year 2000. This enabled the eight companies whose needs covered a greater number of academic degrees (at least four) to be identified. However, the interviews did not take place in two of these, in one because of unavailability and in another because it was located in France.

Four people who held various positions in the FST were interviewed. It was considered essential to interview the head of the GESP (Gabinete de Estágios e Saídas Profissionais) at the FST, since this office was responsible for a variety of activities focusing precisely on graduate entry into working life. It was also decided to interview the heads of the governing bodies of the FST (Chairman of the Scientific Committee, Chairman of the Teaching Committee and Director of the institution), since the intention was to identify the views of people in the academic community on university education and its purposes and thus clarifying the aims of university practice (¹²).

The content of the interviews was analysed to ensure that a comparison was made but also to ensure that the features of each interview were identified. Statistical techniques were used to analyse data from the questionnaire.

(⁷) The decision to post the questionnaire to graduates is relatively common in work of this type carried out in other Portuguese universities (Aveiro and Lisbon Universities, for example), response rates being relatively high.

(⁸) The collection of data was therefore quite successful in terms of the rate of return of duly completed questionnaires (44.1 % of the working universe, composed of 301 individuals, and 33.1 % of the general universe, composed of 401 subjects, exceeds the expected norm - 30 % - in this type of data collection).

(⁹) Collection of information by the ODES (Sistema de Observação de Percursos de Inserção de Diplomados de Ensino Superior, coordinated by the INOFOR - Instituto de Inovação na Formação - Ministry of Labour), carried out in 1999.

(¹⁰) 'Employers': people in the six companies contacted who are responsible for recruitment and who had contacted the GESP (Gabinete de Estágios e Saídas Profissionais) at the FCT to provide information on jobs/training courses offered by the company.

(¹¹) Offers of employment and/or training courses for graduates and recent graduates of the FCT are centralised in a unit which at the time of the empirical research was the above-mentioned GESP. This unit was subsequently incorporated into a larger structure - the CIDI (*Centro de Informação, Divulgação e Imagem*).

(¹²) It might be argued that this option is restrictive; but we felt it was appropriate, bearing in mind that it was impossible to interview the academic community as a whole, and that there was a lack of previous research in this field - which in our opinion meant that it was unsound to use a questionnaire to canvas this population on its views and practices. We also suspected - and this was confirmed when the interviews were carried out - that because of the positions the interviewees held, they were privileged informants for identifying the principal positions, strategies and opinions prevailing among the academic community.



The process of graduate entry into working life: the case of the Faculty of Sciences and Technology

As stated above, the empirical research work involved a case study of the entry into working life of graduates of the FST, an institution that delivers a variety of courses in engineering (Environmental Engineering, Industrial Production, Information Technology, Geology, Mechanics, Chemistry, Physics and Materials) as well as degrees in Mathematics and Applied Chemistry. As usual with a case study, the intention was not to show that the data are generalisable⁽¹³⁾, but rather to provide indications on how entry into working life of university and/or higher education graduates in general takes place.

The relationship between education and employment in the case of FST graduates

The FST graduates in the study tended to obtain their first job after graduating relatively quickly compared with what seems to be the case from the findings of other national (Odes, 2002) and international research (Brennan et al, 2001).

It is also well-known that the transition from education to working life tends to be marked by high job mobility in the three years following graduation. This is probably not specific to higher education graduates, since research into mobility throughout the life cycle (Chagas Lopes, 1989) has shown that people change jobs more frequently in the early years of their working lives.

In the case of FST graduates, access to employment, particularly the first job, tends to depend heavily on networks of personal connections. In this respect our research findings differ from those of other national (Alves, 2001) and international studies (Brennan et al, 2001), since this method of obtaining a job is not as significant in the latter's figures.

In terms of methods of obtaining and offering employment, the Internet is beginning to come to the fore as a link between job seekers and job providers. Larger companies are beginning to set up databases of job seekers from unsolicited applications (graduates sending CVs), and from direct contact with higher education institution students, including final year students. Both

companies and graduates recognise that these institutions must have offices to promote contact between employers and students/graduates, an example of which is as the GESP at the FST.

The transition to working life is also marked by the fact that, once they have finished their degree, graduates who were full-time students during their final year and who obtained higher final average marks tend to have to wait longer before they get a job. It is also important to assess the FST graduates' transition between education and employment on the basis of a set of indicators of the *quality* of the employment.

Thus, it appears that very few graduates experience periods of unemployment, and when they do, these tend to be infrequent and short-lived (rarely exceeding 12 months). They seem to occur more because of bottlenecks and difficulties in access to employment rather than because the graduates' own strategies keep them out of work.

The insecurity of the career trajectory of the graduates in the years immediately following graduation is well known and affects almost half the subjects, though it does tend to diminish over time. This is partly a result of the recruitment strategies of employers, especially large companies, who seem to opt to recruit recent graduates on a fixed-term basis to cover occasional gaps in their organisations.

As would be expected, average pay levels also tend to rise over time after graduation, not only as a result of inflation-linked pay rises, but also in line with career progress. This trend is probably not specific to FST graduates, as it has been observed in other national studies in relation to Portuguese higher education as a whole (Odes, 2002 and 2000).

Finally, it should be noted that the graduates in this study more often join larger companies and public administration and that this trend increases with time after graduation. This seems to be characteristic of Portugal, a theory supported by similar findings from a study on Portuguese higher education graduates in general (Odes, 2002), though research at European level (Brennan et al, 2001) suggests that the private sector is by far the largest employer of such graduates.

⁽¹³⁾ One of the distinctive features of case studies is to allow greater understanding rather than a statistical generalisation of findings (Yin, 1989).



Not surprisingly, therefore, most of the FST graduates view a higher education qualification as a means of gaining access to employment. It is worth noting that none of the three groups interviewed (graduates, employers and academics) accept the idea that graduate unemployment is rising.

The interviewees also pointed out that unemployment has an unequal effect on graduates of the different subjects, engineering graduates enjoying more favourable conditions of access to employment. The *scepticism* about the huge proportions of graduate unemployment and the fact that it overlaps all subject areas is also confirmed by the findings of both national (Odes, 2002 and 2000) and international studies (OECD, 1993).

The relationship between education and work in the case of FST graduates

Among the FST graduates concerned there seems to be some correspondence between the area of study and the field of professional activity; most of the interviewees feel that the two coincide. This widely-held notion that the area of study and professional activity coincide has also been recorded in two other studies carried out in Portugal (Odes, 2002; Alves, 2001).

This does not mean, however, that the qualification in and of itself bestows the ability to perform a professional activity with competence immediately after graduating. The analysis of the answers of interviewees (graduates, employers and academics) suggested that initial academic training is seen as a preliminary stage in building professional ability.

A clear dichotomy has in fact been identified between the university setting and the work setting, *theory* being associated to the former and *practice* to the latter, a pattern that tends to be seen as *natural* and *inevitable* against the current background of rapid and constant economic and professional change. Gaps in initial academic training are also mentioned (particularly as regards languages and user-centred information technology), as is a lack of coordination between the skills and knowledge developed in the university setting and the work setting. Graduates are also notoriously ignorant of the rules, behaviour, communication and relationships, culture and values prevailing in workplace organisations.

For all these reasons, undertaking formal training after graduation and experience-based, career-long learning help to make graduates more competent and capable of doing their job after graduating.

It should be noted that training after graduation is more common among people who work in larger companies when they already have a few years' professional experience. To academic training, graduates more often prefer specialised training that will enhance their professional skills, especially information technology. The demand for this type of training seems to be more common among groups who wait longer to obtain a job (such as women and graduates with higher marks).

Regarding learning by experience, interviewees (employers and graduates) had some difficulty specifying *what is learnt* - though after pausing and hesitating their answers identified three different levels: technical and theoretical knowledge, non-technical skills, and knowledge of workplace organisations and their production processes.

In our opinion, recognition that professional ability builds up gradually is related to the fact that academic interviewees all advocate a more general model of initial academic training, leaving specialisation for the post-degree stage.

A more detailed analysis of the academic interviewees' responses nevertheless highlights a lack of consensus regarding the form such initial general training should take. Some argue for more importance to be given to theoretical and subject knowledge, while others emphasise the importance of moving teaching, and generally the ways in which universities work, toward the development of skills and attitudes relevant to graduates' future lives. The latter is a more comprehensive view, less restricted to the cognitive field and more focused on the development of the whole person.

The idea that changes must be made in teaching (curricula, teaching strategies, etc.) and in how universities operate (compliance with rules and time periods for teaching, for example), so as to improve students' preparation for (working) life, seem to be widespread among the academics interviewed. Such a need for change is latent and has not yet been fully implemented in the FST for various reasons, due both to the institution's



internal functional organisation (departmental 'corporatism'), or to external conditions (e.g. central government funding).

Another issue on which there is little consensus among the academics is how important the preparation for working life should be within the wider context of university activities. Some argue that they should play a central role in decisions determining academic activities, while others strongly disagree, asserting that universities should not be influenced by such concerns.

The view that the criteria used by employers in graduate recruitment processes tend to reflect a devaluation of final degree marks is also in our opinion associated to recognition that *building professional ability is a gradual process*.

Employers do not in fact appear to view graduation with a particular average final mark as a relevant criterion. For some employers, on the other hand, the institution awarding the degree is a factor, evaluated on the basis of prior knowledge (and assessment of the ability) of other graduates of the same institution. What employers do appear to see as essential, however, is the assessment of non-technical skills, which are fundamental to integration into workplace organisations and to inter-personal relationships.

The selection and recruitment process is structured in a similar way in the various companies examined and includes an analysis of curricula and interviews with applicants. The number and type of analyses and interviews is more complex in larger companies with special recruitment and selection departments, and may include group tests and interviews in technical and human resources areas.

Finally, and also helping to detail the relationship between education and work in the case of FST graduates, our research suggests that the increase in the number of graduates has led to a change in the type of professional activities, tasks and functions they perform. Graduates are required to carry out existing tasks and functions, but also tasks and functions in completely new areas in the employing organisations (connected to the environment and quality in particular), and tasks and functions that were not previously carried out by higher education graduates.

In this context, a study in the UK (Harvey, Moon and Geall, 1997) suggests that graduates need to be aware of job opportunities in professional sectors and activities that until recently were not staffed by graduates.

Experience of the transition from university to working life

The vast majority of the FST graduates in the study had little or no contact with the world of work before or during their courses (¹⁴), particularly the women and those whose final marks were higher. In most cases their first job therefore tends to be the first time they come into contact with the world of work and workplace organisations.

It is these circumstances that seem to generate the greatest difficulties in the transition to working life, which graduates see as a stage of change, particularly personal change, and where real life after graduating sometimes does not live up to expectations.

These difficulties are particularly stressed by graduates who completed their studies less recently, which suggests that recent graduates (with only one or two years' experience since graduating) may in most cases not be the most suitable subjects for a fuller appraisal of this transition and the changes involved. Recent graduates may not yet have sufficient detachment to allow them to reflect more deeply on the transition, which they tend to describe as a stage free from difficulty.

Whatever the case, overall there is a high degree of satisfaction among the graduates concerned on their transition to working life; they particularly recognise the value of personal and professional achievement and the usefulness and interest of the activities performed.

The graduates' view is that entry into working life encompasses not only access to employment and its characteristics and restrictions, but also the dynamics of personal and professional achievement and satisfaction and of recognition, by employing organisations, of their professional ability. Employers attach importance to how graduates meet the needs of the job and workplace organisations, while academics stress personal and professional fulfilment and professional ability.

(¹⁴) This is consistent with the general trend in Portugal and Europe, where very few people attend higher education and work at the same time, in contrast with North America, where it is much more common to do so.



This means that people's opinions on entry into working life are to some extent influenced by the positions they hold. But these opinions also show that the interviewees see entry into working life as a multidimensional concept, one that is difficult to assess on the basis of objective criteria (e.g. obtaining a particular job).

It should also be noted that this transition is experienced in different ways according to the groups the graduates fall into; thus, no universal value can be attributed to a higher education qualification in the transition to economic and working life.

For example, only graduates of certain degree courses (applied chemistry, the statistics branch of mathematics, materials engineering) do not yet enjoy a more stable contractual situation, i.e. most of them do not yet have an indefinite contract. It is also the case that some graduates (computer engineering, actuarial mathematics and industrial production engineering) have to wait the least amount of time until they get a job, in contrast to graduates of the operational research branch of mathematics, who tend to wait longest until they obtain work.

A further example is that graduates who obtained higher marks tend to wait longer until they get a job; most do not enjoy more stable contractual conditions than graduates who finished with lower average marks. These are recorded trends but they are classified as slight, and it is therefore not possible to establish an unequivocal link between average degree marks and career trajectories.

The most striking example that a higher education qualification does not have universal value, however, lies in the differences observed between male and female graduates. As other research has shown (Odes, 2002; Brennan et al, 2001; Alves, 2001 among others), the differences between male and female graduate career trajectories are very evident.

It is well known that indefinite contracts and self-employment are less common among the women FST graduates in the study, while part-time work with lower average levels of pay is more common. The conditions of employment of female graduates tend to deteriorate with the passage of time compared to those of their male counterparts. These

trends are perceived by female graduates and are reflected in lower overall levels of career satisfaction than those recorded among male graduates.

It should finally be noted as regards experiences of the transition from university to working life that it appears to be accompanied by the formation of independent conjugal households among graduates. The spouses of graduates generally have higher average levels of education than their parents and families of origin, and are themselves also higher education graduates in many cases. In addition, while many of the graduates in the study originated from the Lisbon Metropolitan Area before attending the FST, the region is boosted after graduation because students from other regions tend to settle there.

Conclusion

In the final part of this article the findings of our study are used to identify areas for further research that would benefit from comparative analysis at European level with a view to developing our understanding of processes of entry into working life experienced by higher education graduates.

A consensus has in fact developed on the usefulness of comparing the situation in several European countries in terms of research into entry into working life with the aim of establishing a better definition of the difficult issues to be examined and the concepts to be brought into play. It is important for other South and Eastern European countries to participate in order to ensure that the conceptualisations and theoretical models do not overlook the specific features of these European regions, a factor that would raise some very relevant research issues (as stressed by Raffe, 2001; Kieffer and Tanguy, 2001) (¹⁵).

Alarmism on the difficulties of entry into working life?

Both data from our research and the findings of other studies suggest that an alarmist attitude prevails that tends to over-emphasise the difficulties felt by higher education graduates in the transition to working life. The period in which contact is first made with work environments and situations after graduation involves specific features and also raises particular difficulties that must be

(¹⁵) These authors state that 'les pays plus puissants sur le plan économique se trouvent également être les plus influents dans le domaine scientifique' (Kieffer and Tanguy, 2001, p. 105), and that 'les conceptualisations actuelles tendaient à ne pas prendre en compte l'Europe du Sud et de l'Est' (Raffe, 2001, p. 122).



clarified. Contractual ties, for example, are insecure, while at the same time jobs are obtained very quickly and the number of mostly short-lived situations of unemployment is low. But some Portuguese studies, analysing the development of the entry into working life of higher education graduates from a given institution immediately after graduating, suggest a deterioration in the conditions involved (Martins, Arroteia and Gonçalves, 2002).

It is therefore worth analysing whether these characteristic features of the process of entry into working life of higher education graduates are recorded in the various European regions. A recent study has identified Portugal as an exception in southern Europe, since the difficulties in the transition to employment seem to be less marked there (Kogan and Schubert, 2003) than in other southern regions.

An article on France also stressed that 'it would be an exaggeration to forecast a serious deterioration in the situation of young graduates in the labour market' (Verdier, 1997, p. 25). Even so, the figures for the higher education graduate unemployment rate cited in the article are well above what the Portuguese data suggest. This is because relatively low rates of unemployment are generally recorded in Portugal - but these coexist with large proportions of the population experiencing insecure employment and contractual instability, a hypothesis that should be examined by European comparison.

Diversification of graduates' professional tasks and functions?

Our case study indicated that graduates perform jobs that already existed, carry out new tasks and functions arising in companies (connected to the environment and quality, for example), and perform work that did not previously require a higher education qualification. In other words, some higher education graduates are subject to 'absorption' through existing professional activities and through the expansion of the professional tasks and functions attributed to this labour market group, while others tend to be subject to 'integration' into the labour market by carrying out professional activities that did not previously require a higher education qualification (⁽¹⁶⁾).

⁽¹⁶⁾ The expressions 'absorption' and 'intergration' are attributed to Teichler and Kehm (1995).

This hypothesis is also supported by the findings of other research, such as Harvey, Moon and Geall (1997) in the UK, in which higher education graduates are advised to be aware of 'new' employment opportunities. Along the same lines various authors (Robertson, 1997; Brown and Scase, 1997; Brennan et al, 1996) have stressed that a change is currently taking place in higher education graduates' traditional careers and jobs. That is to say, they challenge the extent to which the often cited difficulties higher education graduates experience in entering working life are not ultimately simply a consequence either of the growth in their number or in the number of technical and scientific professionals, which is reflected in a change in conditions of employment and the tasks and functions traditionally carried out by graduates of this level of education.

Should these trends be confirmed, research should examine the extent to which 'the terms 'over-education' and 'under-education' may be deceptive' (Hartog, 1999). In our view, the expansion of higher education has coexisted with the emergence of a 'different context' of higher education graduate work/employment, which means that there is a change in the respective labour market and a change in what is traditionally identified as graduate work.

We believe that this situation should not be classified, hurriedly and simplistically, as evidence of over-education or underemployment. Such a view presupposes the existence of a rigid relationship between academic qualifications and jobs. We would argue that the links between education and work/employment should be seen as an interaction in which there are similarities and dissimilarities between the two areas and in which changes in one sphere will impact upon the other. The relevance of this analysis could be better assessed from the findings of comparisons between different European countries as regards patterns of relationships between higher education qualifications and work/employment.

What explains the demand for higher education?

Irrespective of what we know about the exact situation of higher education graduates vis-à-vis employment, it is clear that the growing visibility of the issue of their entry into working life, and especially the widespread



concern regarding unemployment and contractual insecurity, is linked to the fact that graduates increasingly cite employment and occupational outcomes as reasons for going into higher education. Data from our empirical work suggests that these aspects have become increasingly important among the reasons indicated by subjects for going into higher education and for choosing a particular course and a particular educational establishment.

In a situation where, at least in Portugal, the number of people applying for higher education is falling⁽¹⁷⁾, it would be useful to examine the relevance of this hypothesis by analysing the development of higher education in different European countries. This raises various questions that could be examined in the future:

- What is the impact of ideas stressing the increasing difficulties that higher education graduates have in obtaining employment on the subjects' academic choices, and particularly on the demand for higher education?
- What is the impact on society of the increasingly prevalent idea that a higher education qualification does not automatically guarantee access to privileged professional and social positions? Will this help to diminish the symbolic value of the qualification?
- In higher education, what is the likely impact of this increasing visibility of the theme of graduate entry into working life? Will this help to bring about changes in the direction of higher education institutions and professionals?

Public administration as the principal graduate employer?

The findings of our research and comparisons with other national and European studies have suggested that the trend for the public administration to become more important as an employer of higher education graduates may be a specifically Portuguese trait. Confirmation of this theory and an examination of the reasons underlying it is an area that would benefit from comparative study at European level, particularly in order to gain an understanding of the extent to which it reflects a specific feature of the national labour market.

What is the role of networks of personal acquaintances in access to employment?

The importance of networks of personal acquaintances in gaining access to and obtaining employment should also be analysed. According to some researchers (Kieffer and Tanguy, 2001), family and social networks are very active in southern Europe as an element of access to employment, which suggests that this could be a specific feature of this region. The limitations, dimensions and explanatory factors of this feature should be addressed from a comparative perspective.

What differences are there between male and female graduate career trajectories?

Both the findings of our own research and the conclusions of other studies in the same area very clearly show that access to the labour market and career trajectories in the years following graduation differ significantly according to the graduate's gender.

Our data suggest that male graduates appear to enjoy more favourable conditions of entry into working life which tend to become even more advantageous with the passage of time after graduating. This is reflected in a higher level of satisfaction of male graduates compared to female graduates in relation to career trajectory and situation.

Our research data also suggests that the reasons for these differences should be sought both in the recruitment and labour management strategies of companies, and in the choices and strategies of graduates themselves as regards work-family balance. It should be remembered, as our research has shown, that the period of entry into working life is accompanied by the formation of independent conjugal households by many graduates.

A recent European comparison (Smyth, 2003) shows that female graduate unemployment rates tend to be higher than male rates, particularly in Central European and Mediterranean countries, in contrast to Scandinavia and Eastern Europe. It would therefore be of interest to examine these gender differences during the period of entry into working life⁽¹⁸⁾ from a European perspective, that would clarify the forms and reasons for European diversity in this area.

⁽¹⁷⁾ Portugal has experienced a fall in the number of young people entering higher education in the last two academic years, even though, according to the 2001 Census, only 8.6 % of the population of 21 years of age or above had completed higher education. This figure is below that recorded in many European countries.

⁽¹⁸⁾ The same piece of work states that 'much research on gender differentiation and segregation within the labour market has focused on adult workers. This paper indicates the need to investigate how gender differentiation emerges early in the labour market career, and the impact of early employment experiences on subsequent career trajectories' (Smyth, 2003, p. 84).



What is the link between average degree marks and entry into working life?

The findings of our research have not enabled a clear (and statistically significant) relationship to be established between average degree marks and entry into working life. Employers, however, say that they do not attach importance to final marks as a recruitment criterion. Students who graduate with higher average marks experience longer and more complex periods of transition to working life, since they previously had less (or no) contact with the labour market.

According to what graduates, employers and academics say, this situation seems to reflect a dichotomy in higher education (associated to theory) and working life (characterised by practice). We should assess whether these assertions are generally true of Europe, and try to understand to what extent some education systems foster greater proximity to the economic and professional world; how they make it possible to go beyond this dichotomy; and, within these systems, what the link is between average degree marks and entry into working life.

Entry into working life: a stage of lifelong learning?

Our research suggests that entry into working life is a learning period in which the subjects, mostly for the first time, come into contact with professional situations in which they need to learn technical and theoretical knowledge and to develop capacities for interrelating in work environments. As the findings also highlight, however, such learning extends throughout the subjects' career trajectories, since all the groups of interviewees stress that professional ability builds up gradually.

An extremely broad field of research emerges in this area, focusing on processes of lifelong learning and coordination between personal, career and academic trajectories. Analyses of the supply of training available to higher education graduates, for example, and the study of people's academic trajectories are areas in which comparisons between the situation in various European countries could be useful in investigating the variety of training patterns, strategies and practices.

This range of aspects should be developed in the field of educational research on entry into working life and would benefit from comparison at European level, as well as from a study that would bring different theoretical and disciplinary perspectives into play.

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